Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] 1. A pixel array for a non-touch panel input device, wherein the pixel array at least comprises a plurality of first pixel structures with each pixel structure at least comprising:
a sub-pixel; and
a first shadow pixel positioned on one side of the sub-pixel.

[c2] 2. The pixel array of claim 1, wherein the first shadow pixel is fabricated using a material capable of producing electromagnetic radiation in the invisible portion of the light spectrum.

[c3] 3. The pixel array of claim 1, wherein the first shadow pixel is set to emit electromagnetic radiation either in a first electromagnetic radiation state or in a second electromagnetic radiation state such that the first and the second electromagnetic radiation states are different from each other.

[c4] 4. The pixel array of claim 3, wherein the first shadow pixel in the first electromagnetic radiation state has a length or width different from the first shadow pixel in

the second electromagnetic radiation state.

[c5] 5. The pixel array of claim 3, wherein the first shadow pixel in the first electromagnetic radiation state has a reflectivity different from the first shadow pixel in the second electromagnetic radiation state.

[c6] 6. The pixel array of claim 3, wherein the first shadow pixel in the first electromagnetic radiation state radiates with a wavelength different from the first shadow pixel in the second electromagnetic radiation state.

[c7] 7. The pixel array of claim 3, wherein the first shadow pixel in the first electromagnetic radiation state is fabricated using a material different from the first shadow pixel in the second electromagnetic radiation state.

[c8] 8. The pixel array of claim 1, wherein each first pixel structure furthermore comprises a second shadow pixel positioned on the other side of the sub-pixel.

[c9] 9. The pixel array of claim 8, wherein the second shadow pixel is fabricated using a material capable of producing electromagnetic radiation in the invisible portion of the spectrum.

[c10] 10. The pixel array of claim 8, wherein the second shadow pixel is set to emit electromagnetic radiation ei-

ther in a third electromagnetic radiation state or in a fourth electromagnetic radiation state such that the third and the fourth electromagnetic radiation state are different from each other.

[c11] 11. The pixel array of claim 10, wherein the second shadow pixel in the third electromagnetic radiation state has a length or width different from the second shadow pixel in the fourth electromagnetic radiation state.

[c12] 12. The pixel array of claim 10, wherein the second shadow pixel in the third electromagnetic radiation state has a reflectivity different from the second shadow pixel in the fourth electromagnetic radiation state.

[c13] 13. The pixel array of claim 10, wherein the second shadow pixel in the third electromagnetic radiation state radiates with a wavelength different from the second shadow pixel in the fourth electromagnetic radiation state.

[c14] 14. The pixel array of claim 10, wherein the second shadow pixel in the third electromagnetic radiation state is fabricated using a material different from the second shadow pixel in the fourth electromagnetic radiation state.

[c15] 15. The pixel array of claim 1, wherein the pixel array

furthermore comprises a plurality of second pixel structures with each second pixel structure at least having a sub-pixel without a first shadow pixel such that the sub-pixel in each second pixel structure is located in a position corresponding to the sub-pixel of the first pixel structure.

[c16] 16. The pixel array of claim 15, wherein each second pixel structure furthermore comprises a second shadow pixel positioned on the other side of the sub-pixel corresponding to the second shadow pixel in the first pixel structure.

[c17] 17. The pixel array of claim 16, wherein the second shadow pixel is fabricated using a material capable of producing electromagnetic radiation in the invisible part of the spectrum.